



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------|------------------|
| 09/771,370 | 01/26/2001 | Eric Malcolm Rives | 72135 | 6461 |
| 27975 | 7590 | 01/02/2004 | | |
| ALLEN, DYER, DOPPELT, MILBRATH & GILCHRIST P.A. 1401 CITRUS CENTER 255 SOUTH ORANGE AVENUE P.O. BOX 3791 ORLANDO, FL 32802-3791 | | | EXAMINER LE, LANA N | |
| | | | ART UNIT 2685 | PAPER NUMBER |

DATE MAILED: 01/02/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/771,370

Applicant(s)

RIVES ET AL.

Examiner

Lana Le

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-8 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 2,5,9,13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Pande et al (US 6,640,084).

Regarding claim 6, Pande et al discloses a loop-powered digital radio comprising:

a line interface 16 that is adapted to be coupled to a wireline communication link over which digital communication signals sourced from first digital communication equipment installed at a first site are transported, the wireline communication link also conveying electrical power for operating wireline digital communication equipment coupled thereto, the line interface being operative to extract power from the wireline

communication link and interface digital telecommunication signals transported thereover (col 5, lines 20-24; lines 52-56);

a wireless transceiver 14, coupled to the line interface and being configured to wirelessly transmit and receive RF energy containing the digital telecommunication signals (col 5, lines 25-42); and

a DC-DC voltage converter coupled to the line interface and being operative to convert power extracted thereby to voltages necessary to operate the wireless transceiver (col 5, lines 43-57; col 9, lines 32-65).

Regarding claim 7, Pande et al further disclose the loop-powered digital radio according to claim 6 wherein the line interface 16 is adapted to be coupled to the wireline communication link at a second site ODU that is remote from the first site IDU indoor unit and provides no source of electrical power, exclusive of that conveyed by the wireline link, that is sufficient to operate the radio.

Regarding claim 8, Pande et al further discloses the loop-powered digital radio according to claim 6, wherein the digital telecommunication signals inherently comprise T1 rate via the cable line 30 digital telecommunication signals.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaschke et al (US 6,078,821) in view of Dent et al (US 5,812,955).

Regarding claim 1, Kaschke et al discloses a method of providing digital communications between a first site 311 and a second site 313 remote from the first site comprising the steps of:

(a) transporting digital communication signals sourced from first digital communication equipment 305 installed at the first site 311 over a first wireline communication link 424, 426 that also conveys electrical power for wireline digital communication equipment coupled thereto (col 3, line 55 – col 4, line 22);

Kaschke et al didn't further disclose:

(b) providing a first wireless communication device at a third site remote with respect to the first and second sites; and

(c) coupling the first wireless communication device to the first wireline communication link , so as to extract electrical power for operating the first wireless communication device from electrical power conveyed over the first wireline communication link, and enable the digital communication signals to be wirelessly transmitted by the wireless communication device for delivery to the second site.

Dent et al further disclose:

(b) providing a first wireless communication device 120 at a third site 102 remote with respect to the first and second sites 114 (fig. 1A; col 7, line 50 – col 8, line 60); and

(c) coupling the first wireless communication device to the first wireline communication link 136 (fig. 2), so as to extract electrical power for operating the first

Art Unit: 2685

wireless communication device 120 from electrical power 134 conveyed over the first wireline communication link, and enable the digital communication signals to be wirelessly transmitted by the wireless communication device 120 for delivery to the second site (col 9, line 62- col 10, line 21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a third site remote to first and second sites in order to allow the communication device to communicate wirelessly in a cellular network and still be able to connect to the wireline or cordless network.

Regarding claim 3, Kaschke et al and Dent et al disclose the method according to claim 1 wherein Dent et al further discloses the first wireless communication device 120 comprises a digital radio that is operative to interface T1 rate with wire network 108 to PSTN digital telecommunication signals with the first wireline communication link, and to wirelessly transmit and receive RF energy containing the T1 rate digital telecommunication signals (col 8, lines 15-32).

Regarding claim 10, Kaschke et al discloses a system for providing digital communications between a first site 311 and a second site 313 remote from the first site comprising:

a first wireline communication link 424, 426 adapted to transport digital communication signals sourced from first digital communication equipment installed at the first site and convey electrical power for wireline digital communication equipment coupled thereto (col 3, line 55 – col 4, line 22).

Kaschke et al didn't further disclose:

Art Unit: 2685

a first wireless communication device located at a third site remote with respect to the first and second sites, and being operative to extract electrical power for its operation from the first wireline communication link and to wirelessly transmit the digital communication signals for delivery to the second site

Dent et al discloses:

a first wireless communication device 120 located at a third site 102 remote with respect to the first and second sites 114, and being operative to extract electrical power 134 for its operation from the first wireline communication link 136 and to wirelessly transmit the digital communication signals for delivery to the second site (col 9, line 62-col 10, line 21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a third site remote to first and second sites in order to allow the communication device to communicate wirelessly in a cellular network and still be able to connect to the wireline or cordless network.

Regarding claim 11, Kaschke et al and Dent et al disclose the system according to claim 10, wherein Dent et al further discloses the first wireless communication device 120 comprises a digital radio that is operative to interface T1 rate with wire network 108 to PSTN digital telecommunication signals with the first wireline communication link, and to wirelessly transmit and receive RF energy containing the T1 rate digital telecommunication signals (col 8, lines 15-32).

3. Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaschke et al and Dent et al as applied to claim 1 above, and further in view of Pande et al (US 6,640,084).

Regarding claim 4, Kaschke et al and Dent et al disclose the method according to claim 1, wherein they didn't further disclose the first wireless communication device includes:

a line interface coupled to the first wireline communication link, and being operative to extract power therefrom and interface digital telecommunication signals transported thereover; a wireless transceiver, coupled to the line interface and being configured to wirelessly transmit and receive RF energy containing the digital telecommunication signals; and a DC-DC voltage converter coupled to the line interface and being operative to convert power extracted thereby to voltages necessary to operate the wireless transceiver.

Pande et al discloses the first wireless communication device 14 (fig. 1) includes:

a line interface 16 coupled to the first wireline communication link, and being operative to extract power therefrom and interface digital telecommunication signals transported thereover (col 5, lines 20-24, lines 52-56);

a wireless transceiver 14, coupled to the line interface 16 and being configured to wirelessly transmit and receive RF energy containing the digital telecommunication signals (col 5, lines 25-42); and

a DC-DC voltage converter 22 coupled to the line interface and being operative to convert power extracted thereby to voltages necessary to operate the wireless

Art Unit: 2685

transceiver (col 5, lines 43-57; col 9, lines 32-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the communication device includes an interface, transceiver and power supply in order to connect to the wireline network and obtain power therefrom.

Regarding claim 12, Kaschke et al and Dent et al disclose the system according to claim 10, wherein they didn't further disclose the first wireless communication device includes:

a line interface coupled to the first wireline communication link, and being operative to extract power therefrom and interface digital telecommunication signals transported thereover; a wireless transceiver, coupled to the line interface and being configured to wirelessly transmit and receive RF energy containing the digital telecommunication signals; and a DC-DC voltage converter coupled to the line interface and being operative to convert power extracted thereby to voltages necessary to operate the wireless transceiver.

Pande et al discloses the first wireless communication device 14 (fig. 1) includes:

a line interface 16 coupled to the first wireline communication link, and being operative to extract power therefrom and interface digital telecommunication signals transported thereover (col 5, lines 20-24, lines 52-56);

a wireless transceiver 14, coupled to the line interface 16 and being configured to wirelessly transmit and receive RF energy containing the digital telecommunication signals (col 5, lines 25-42); and

a DC-DC voltage converter 22 coupled to the line interface and being operative to convert power extracted thereby to voltages necessary to operate the wireless transceiver (col 5, lines 43-57; col 9, lines 32-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the communication device includes an interface, transceiver and power supply in order to connect to the wireline network and obtain power therefrom.

Allowable Subject Matter

4. Claims 2, 5, 9, 13-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 2, Kaschke et al and Dent et al disclose the method according to claim 1, wherein the cited prior art fails to further disclose the method further comprising the steps of:

(d) providing a second wireless communication device at a fourth site remote with respect to the third site;

(e) coupling a second wireline communication link, that conveys electrical power for wireless digital communication equipment coupled thereto and transports digital communication signals thereover, to the second wireless communication device at the fourth site and to digital communication equipment installed at the second site, so as to provide electrical power for operating the second wireless communication device and enable the digital communication signals to be received by the second wireless communication device and forwarded over the second wireline communication link to the digital communication equipment installed at the second site.

Regarding claim 5, Kaschke et al and Dent et al disclose the method according to claim 4, wherein the cited prior art fails to further disclose the digital communication signals comprise T1 digital communication signals, the line interface includes a T1 framer, and wherein the wireless transceiver includes a transmitter unit that is configured to perform modulation and up-conversion to RF of baseband T1 digital communication signals provided by the T1 framer, and a receiver unit that is configured to perform RF to baseband down-conversion and demodulation of Rf energy received thereby and containing T1 digital communication signals for application to the T1 framer.

Regarding claim 9, Pande et al discloses the loop-powered digital radio according to claim 8, wherein the cited prior art fails to further disclose the line interface includes a T1 framer, and wherein the wireless transceiver includes a transmitter unit that is configured to perform modulation and up-conversion to RF of baseband T1 digital communication signals provided by the T1 framer, and a receiver unit that is configured

Art Unit: 2685

to perform RF to baseband down-conversion and demodulation of Rf energy received thereby and containing T1 digital communication signals for application to the T1 framer.

Regarding claim 13, Kaschke et al and Dent et al disclose the system according to claim 12, wherein the cited prior art fails to further disclose the digital communication signals comprise T1 digital communication signals, the line interface includes a T1 framer, and wherein the wireless transceiver includes a transmitter unit that is configured to perform modulation and up-conversion to RF of baseband T1 digital communication signals provided by the T1 framer, and a receiver unit that is configured to perform RF to baseband down-conversion and demodulation of Rf energy received thereby and containing T1 digital communication signals for application to the T1 framer.

Regarding claim 14, Kaschke et al and Dent et al disclose the system according to claim 10, wherein the cited prior art fails to further disclose the system further comprising a second wireless communication device at a fourth site remote with respect to the third site; and a second wireline communication link, that conveys electrical power for wireless digital communication equipment coupled thereto and transports digital communication signals thereover, coupled to the second wireless communication device at the fourth site and to digital communication equipment installed at the second site, so as to provide electrical power for operating the second wireless communication device and enable the digital communication signals to be received by the second

Art Unit: 2685

wireless communication device and forwarded over the second wireline communication link to the digital communication equipment installed at the second site.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana Le whose telephone number is (703) 308-5836.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (703) 305-4385. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

Lana Le

December 29, 2003



**QUOCHIEN B. VUONG
PRIMARY EXAMINER**